

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.

Application Serial Number:

09/043,128A

Source:

TPV/6

Date Processed by STIC:

6/23/05-

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IFW16

RAW SEQUENCE LISTING

DATE: 06/23/2005

PATENT APPLICATION: US/09/643,128A

TIME: 14:10:27

Input Set : A:\GeneInact seq (2000)-2.ST25.txt

Output Set: N:\CRF4\06232005\I643128A.raw

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3 <110> APPLICANT: GMR Epigenetics Corporation
5 <120> TITLE OF INVENTION: Gene inactivation by targeted DNA methylation
7 <130> FILE REFERENCE: GMR-001ORD
9 <140> CURRENT APPLICATION NUMBER: US 09/643,128A
10 <141> CURRENT FILING DATE: 2000-08-21
12 <150> PRIOR APPLICATION NUMBER: US 60/196,749
13 <151> PRIOR FILING DATE: 2000-04-12
15 <150> PRIOR APPLICATION NUMBER: US 60/214,148
16 <151> PRIOR FILING DATE: 2000-06-26
18 <160> NUMBER OF SEQ ID NOS: 54
20 <170> SOFTWARE: PatentIn version 3.3
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 11
24 <212> TYPE: DNA
25 <213> ORGANISM: Artificial
27 <220> FEATURE:
28 <223> OTHER INFORMATION: This sequence is complementary to and methylates a human
29     sequence.
32 <220> FEATURE:
W--> 33 <221> NAME/KEY: CpG dinucleotide
34 <222> LOCATION: (1)..(11)
35 <223> OTHER INFORMATION: 1): Phosphothioate oligonucleotide modified with 5-
methylcytidine
36     (m5C) at positions 7 and 10.
37     2). Semi-methylated hairpin loop
39 <220> FEATURE:
W--> 40 <221> NAME/KEY: CpG dinucleotide
41 <222> LOCATION: (1)..(11)
43 <400> SEQUENCE: 1
44 cgacgtcgtc g
47 <210> SEQ ID NO: 2
48 <211> LENGTH: 22
49 <212> TYPE: DNA
50 <213> ORGANISM: Artificial sequence
52 <220> FEATURE:
53 <223> OTHER INFORMATION: This sequence is complementary to and methylates a human
54     sequence.
57 <220> FEATURE:
W--> 58 <221> NAME/KEY: CpG dinucleotide
59 <222> LOCATION: (1)..(22)
60 <223> OTHER INFORMATION: 1): Phosphothioate oligonucleotide modified with 5-
methylcytidine
61     (m5C) at positions 5, 9 and 20
62     2). Semi-methylated hairpin loop

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11

64 <220> FEATURE:

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W--> 65 <221> NAME/KEY: CpG dinucleotide
66 <222> LOCATION: (1)..(22)
68 <400> SEQUENCE: 2
69 agcccgggct gggaggagtc gg 22
72 <210> SEQ ID NO: 3
73 <211> LENGTH: 33
74 <212> TYPE: DNA
75 <213> ORGANISM: Artificial sequence
77 <220> FEATURE:
78 <223> OTHER INFORMATION: This sequence is complementary to and methylates a human
79 sequence.
82 <220> FEATURE:

W--> 83 <221> NAME/KEY: CpG dinucleotide
84 <222> LOCATION: (1)..(33)
85 <223> OTHER INFORMATION: 1): Phosphothioate oligonucleotide modified with 5-
methylcytidine
86 (m5C) at positions #7, #10, #16, #20, #31.
88 <220> FEATURE:

W--> 89 <221> NAME/KEY: CpG dinucleotide
90 <222> LOCATION: (1)..(33)
91 <223> OTHER INFORMATION: 2) Semi-methylated loop
93 <220> FEATURE:

W--> 94 <221> NAME/KEY: CpG dinucleotide
95 <222> LOCATION: (1)..(33)
97 <400> SEQUENCE: 3
98 cgacgtcgtc gagcccgggc tgggaggagt cgg 33
101 <210> SEQ ID NO: 4
102 <211> LENGTH: 21
103 <212> TYPE: DNA
104 <213> ORGANISM: Artificial sequence
106 <220> FEATURE:
107 <223> OTHER INFORMATION: This sequence is complementary to and methylates a human
108 sequence.
111 <220> FEATURE:

W--> 112 <221> NAME/KEY: CpG dinucleotide
113 <222> LOCATION: (1)..(21)
114 <223> OTHER INFORMATION: 1): Phosphothioate oligonucleotide modified with 5-
methylcytidine
115 (m5C) at positions #2, #12 and #19.
116 2). Sequence derived from the promoter of human c-myc gene.
117 3). Semi-methylated loop.
119 <220> FEATURE:

W--> 120 <221> NAME/KEY: CpG dinucleotide
121 <222> LOCATION: (1)..(21)
123 <220> FEATURE:

W--> 124 <221> NAME/KEY: CpG dinucleotide
125 <222> LOCATION: (1)..(21)
127 <400> SEQUENCE: 4
128 tcgctaattc ccgcccaccg g 21
131 <210> SEQ ID NO: 5
132 <211> LENGTH: 20

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133 <212> TYPE: DNA
134 <213> ORGANISM: Artificial sequence
136 <220> FEATURE:
137 <223> OTHER INFORMATION: This sequence is complementary to and methylates a human
138     sequence.
141 <220> FEATURE:
W--> 142 <221> NAME/KEY: CpG dinucleotide
143 <222> LOCATION: (1)..(20)
145 <220> FEATURE:
W--> 146 <221> NAME/KEY: CpG dinucleotide
147 <222> LOCATION: (1)..(20)
148 <223> OTHER INFORMATION: 1). Phosphothioate oligonucleotide modified with 5-
methylcytidine
149     at positions 3 and 18.
150     2) Complementary to promoter of human c-myc.
151     3) Semi-methylated hairpin.
153 <400> SEQUENCE: 5
154 accggccctt tataatgcga                                20
157 <210> SEQ ID NO: 6
158 <211> LENGTH: 20
159 <212> TYPE: DNA
160 <213> ORGANISM: Artificial sequence
162 <220> FEATURE:
163 <223> OTHER INFORMATION: This sequence is complementary to and methylates a human
164     sequence.
167 <220> FEATURE:
W--> 168 <221> NAME/KEY: CpG dinucleotide
169 <222> LOCATION: (1)..(20)
170 <223> OTHER INFORMATION: 1): Phosphothioate oligonucleotide modified with 5-
methylcytidine
171     (m5C) at positions #3 and #10.
172     2). Sequence derived from the promoter of human c-myc gene.
174 <220> FEATURE:
W--> 175 <221> NAME/KEY: CpG dinucleotide
176 <222> LOCATION: (1)..(20)
177 <223> OTHER INFORMATION: 1): Phosphothioate oligonucleotide modified with 5-
methylcytidine
178     (m5C) at positions 3 and 10. 3
179     2) Sequence complementary to the promoter of human c-myc gene.
180     3) Semi-methylated hairpin.
182 <400> SEQUENCE: 6
183 tccgcccacc ggccctttat                                20
186 <210> SEQ ID NO: 7
187 <211> LENGTH: 18
188 <212> TYPE: DNA
189 <213> ORGANISM: Artificial sequence
191 <220> FEATURE:
192 <223> OTHER INFORMATION: This sequence is complementary to and methylates a human
193     sequence.
196 <220> FEATURE:
W--> 197 <221> NAME/KEY: CpG dinucleotide
198 <222> LOCATION: (1)..(18)

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199 <223> OTHER INFORMATION: 1): Phosphothioate oligonucleotide modified with 5-methylcytidine

200 (m5C) at positions #3, #10 and #16.

201 2). Sequence derived from the promoter of HIV gene.

203 <220> FEATURE:

W--> 204 <221> NAME/KEY: CpG dinucleotide

205 <222> LOCATION: (1)..(18)

207 <220> FEATURE:

W--> 208 <221> NAME/KEY: CpG dinucleotide

209 <222> LOCATION: (1)..(18)

210 <223> OTHER INFORMATION: 3). Semi-methylated hairpin.

212 <400> SEQUENCE: 7

213 cacgtagccc gagagctg 18

216 <210> SEQ ID NO: 8

217 <211> LENGTH: 18

218 <212> TYPE: DNA

219 <213> ORGANISM: Artificial sequence

221 <220> FEATURE:

222 <223> OTHER INFORMATION: This sequence is complementary to and methylates a human

223 sequence.

226 <220> FEATURE:

W--> 227 <221> NAME/KEY: CpG dinucleotide

228 <222> LOCATION: (1)..(18)

229 <223> OTHER INFORMATION: 1): Phosphothioate oligonucleotide modified with 5-methylcytidine

230 (m5C) at positions #7, #9 and #16.

231 2). Sequence derived from the promoter of HIV gene.

233 <220> FEATURE:

W--> 234 <221> NAME/KEY: CpG dinucleotide

235 <222> LOCATION: (1)..(18)

236 <223> OTHER INFORMATION: 3). Semi-methylated hairpin.

238 <220> FEATURE:

W--> 239 <221> NAME/KEY: CpG dinucleotide

240 <222> LOCATION: (1)..(18)

242 <400> SEQUENCE: 8

243 cccgagagct gcatccgg 18

246 <210> SEQ ID NO: 9

247 <211> LENGTH: 18

248 <212> TYPE: DNA

249 <213> ORGANISM: Artificial sequence

251 <220> FEATURE:

252 <223> OTHER INFORMATION: This sequence is complementary to and methylates a human

253 sequence.

256 <220> FEATURE:

W--> 257 <221> NAME/KEY: CpG dinucleotide

258 <222> LOCATION: (1)..(18)

259 <223> OTHER INFORMATION: 1): Phosphothioate oligonucleotide modified with 5-methylcytidine

260 (m5C) at positions #2, #13 and #16.

261 2). Sequence derived from the promoter of HIV gene.

263 <220> FEATURE:

W--> 264 <221> NAME/KEY: CpG dinucleotide

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265 <222> LOCATION: (1)..(18)
266 <223> OTHER INFORMATION: 3). Semi-methylated hairpin.
268 <220> FEATURE:
W--> 269 <221> NAME/KEY: CpG dinucleotide
270 <222> LOCATION: (1)..(18)
272 <400> SEQUENCE: 9
273 gctgcatata agcagctg 18
276 <210> SEQ ID NO: 10
277 <211> LENGTH: 18
278 <212> TYPE: DNA
279 <213> ORGANISM: Artificial sequence
281 <220> FEATURE:
282 <223> OTHER INFORMATION: This sequence is complementary to and methylates a human
283 sequence.
286 <220> FEATURE:
W--> 287 <221> NAME/KEY: CpG dinucleotide
288 <222> LOCATION: (1)..(18)
289 <223> OTHER INFORMATION: 1). Phosphothioate oligonucleotide modified with 5-
methylcytidine
290 (m5C) at positions #4, #10 and #15.
291 2) Sequence derived from the promoter of human uPAR gene.
293 <220> FEATURE:
W--> 294 <221> NAME/KEY: CpG dinucleotide
295 <222> LOCATION: (1)..(18)
297 <220> FEATURE:
W--> 298 <221> NAME/KEY: CpG dinucleotide
299 <222> LOCATION: (1)..(18)
300 <223> OTHER INFORMATION: 3). Semi-methylated hairpin.
302 <400> SEQUENCE: 10
303 aggcgcccac gcatctgg 18
306 <210> SEQ ID NO: 11
307 <211> LENGTH: 19
308 <212> TYPE: DNA
309 <213> ORGANISM: Artificial sequence
311 <220> FEATURE:
312 <223> OTHER INFORMATION: This sequence is complementary to and methylates a human
313 sequence.
316 <220> FEATURE:
W--> 317 <221> NAME/KEY: CpG dinucleotide
318 <222> LOCATION: (1)..(19)
319 <223> OTHER INFORMATION: 1). Phosphothioate oligonucleotide modified with 5-
methylcytidine
320 (m5C) at positions #2, #10 and #17.
321 2). Sequence derived from the promoter of human uPAR gene.
323 <220> FEATURE:
W--> 324 <221> NAME/KEY: CpG dinucleotide
325 <222> LOCATION: (1)..(19)
327 <220> FEATURE:
W--> 328 <221> NAME/KEY: CpG dinucleotide
329 <222> LOCATION: (1)..(19)
330 <223> OTHER INFORMATION: 3). Semi-methylated hairpin.

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 06/23/2005
PATENT APPLICATION: US/09/643,128A TIME: 14:10:28

Input Set : A:\GeneInact seq (2000)-2.ST25.txt
Output Set: N:\CRF4\06232005\I643128A.raw

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,28,30

VERIFICATION SUMMARY

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Input Set : A:\GeneInact seq (2000)-2.ST25.txt

Output Set: N:\CRF4\06232005\I643128A.raw

L:33 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:1
L:40 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:1
L:58 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:2
L:65 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:2
L:83 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:3
L:89 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:3
L:94 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:3
L:112 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
L:120 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
L:124 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
L:142 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:5
L:146 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:5
L:168 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:6
L:175 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:6
L:197 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:7
L:204 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:7
L:208 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:7
L:227 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:8
L:234 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:8
L:239 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:8
L:257 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:9
L:264 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:9
L:269 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:9
L:287 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:10
L:294 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:10
L:298 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:10
L:317 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:11
L:324 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:11
L:328 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:11
L:347 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:12
L:351 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:12
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L:377 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:13
L:384 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:13
L:403 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:14
L:410 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:14
L:429 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:15
L:436 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:15
L:441 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:15
L:459 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:16
L:466 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:16
L:471 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:16
L:489 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:17
L:496 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:17
L:500 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:17
L:519 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:18
L:526 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:18
L:530 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:18

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L:549 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:19

L:557 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:19

L:1050 M:259 W: Allowed number of lines exceeded, <223> Other Information: